

# HEALTH CONSULTATION

ALC/RIVET MILE-USAF SITE  
DRESDEN, PETTIS COUNTY, MISSOURI  
[EPA FACILITY ID: MO0570090027](#)

*November 28, 1999*

Prepared by:  
Missouri Department of Health Bureau of Environmental Epidemiology  
under Cooperative Agreement with the Agency for Toxic Substances and Disease Registry

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# HEALTH CONSULTATION

## ALC/RIVET MILE-USAF SITE DRESDEN, PETTIS COUNTY, MISSOURI

### STATEMENT OF ISSUES

The Missouri Department of Health (DOH) in cooperation with the Agency for Toxic Substances and Disease Registry (ATSDR) has prepared this health consultation to address public health issues regarding possible contamination and health impacts on residents living near the former Air Logistic Center (ALC)/Rivet Mile-United States Air Force (USAF) site, Dresden, Pettis County, Missouri. Because no in-depth sampling has been conducted at the Rivet Mile site, there is a data gap about whether contamination is present on site, its location, and the levels at which the contamination might exist. This health consultation will determine if a health risk exists for residents living near the site and/or present employees working at the site.

### BACKGROUND

The 00-Air Logistics Center (ALC)/Rivet Mile United States Air Force (USAF), referred to as the Rivet Mile/USAF site (the site), consists of two metal buildings on approximately 6.5-acres located within the city limits of Dresden, Missouri. Dresden is a small rural town with a population of about 200 ([See Figure 1](#)). The site is located on the eastern edge of the town and is surrounded by a fence with a locking gate at the entrance ([1](#)). The site currently is part of the nearby Tyson Foods, Inc. operation.

From 1964 to 1993, the two buildings were leased and used by the USAF and contract personnel from nearby Whiteman Air Force Base. The buildings served primarily as a maintenance center for repairing and maintaining Minuteman Missile silo facilities and equipment. Investigation has shown that the military leased, but never owned, the Rivet Mile property ([1](#)). This could still make it eligible for investigation as a Formerly Utilized Defense Site (FUDS) ([2](#)).

During the nearly 30 years of USAF use, maintenance activities at the buildings produced "waste streams" including fuel, oil, solvents, coolants, paint-related materials (thinners, removers), asbestos, and polychlorinated biphenyls (PCBs). Other activities at the site may have included handling waste material from metal plating operations and repair/maintenance of missile coolant systems. The following solvents were listed in a 1986 USAF license permit application (for temporary storage and transportation facility): 1,1,1-trichloroethane; Freon (trichlorotrifluoroethane); methyl ethyl ketone; and naphtha aliphatic. According to the application, only trichloroethane was to be used in any quantity (anticipated use: 55 gallons/month). By 1987, the amount of hazardous waste handled at the site was reported to be minimal, mainly consisting of lead-based paint scrapings, along with cadmium and chromate waste ([1](#)).

The only known on-site environmental sampling was associated with a 1989-1990 leaking underground storage tank removal investigation, conducted by an Air Force contractor. That investigation found one leaking underground storage tank, but there are reports from former employees that there may be two other tanks still on site. There are also previous reports of stained soil, possibly from spills and/or leaks of chemicals used on site. There also is a well on site that has been used for site operations. Based on what is known and/or suspected about former site operations and contaminants used throughout the site's history, the well could have become contaminated. With no sampling done on the on-site surface soil or water well, this leaves a data gap as to potential completed exposure pathways for present workers.

The 5,600-gallon underground single-chamber tank found during the investigation contained 660 gallons of waste oil and water, and 4,500 gallons of used motor/fuel oil. The tank was emptied and removed, with the contents being sent to a fuel blending operation in Kansas City, Mo. [\(1,3\)](#).

Two soil samples, gathered from below where the tank lay, indicated the soil was contaminated with 890 and 2,151 parts per million (ppm) of total petroleum hydrocarbons (TPH). Another soil sample, taken from the cavity wall, was not contaminated [\(3\)](#).

Forty-eight tons of contaminated soil were removed from around and below the tank cavity and sent off site for proper disposal. Follow-up sampling showed non-detectable levels of TPH, benzene, ethylbenzene, and total xylenes. Toluene was detected at 0.24 ppm. MDNR's Leaking Underground Storage Tank (LUST) Program determined that these levels were acceptable, so the tank cavity was backfilled with "select fill material" to the existing grade level. The LUST program gave approval of the Rivet Mile tank closure on April 25, 1990 [\(3\)](#).

Rivet Mile was closed in 1991 as part of a military stand-down. In February 1995, Tyson Foods, Inc. purchased the property as part of an expansion of their nearby chicken processing and hatchery complex. Prior to purchasing the site, Tyson Foods hired an environmental consulting firm to conduct an environmental audit of the property. No known environmental sampling for hazardous waste was conducted during the audit, but based upon that audit Tyson Foods considered the site property safe to purchase. Currently, there are about 10 Tyson employees working on site [\(1\)](#).

Of further concern is that there are houses as close as 300 feet (west) of the site. These and all other residences in Dresden rely on private wells for their drinking water. Further, the Pettis County R-XII Elementary School, located within a quarter mile of the site, relies on a private well for drinking water [\(1\)](#). This school has an enrollment of approximately 80 children [\(4\)](#).

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### DISCUSSION

MDNR's Preliminary Assessment of Rivet Mile/USAF site indicated past use and the possible release of environmental [contaminants](#) at the site. Residents living near the site depend on private wells for their drinking water and local residents could be exposed to site-related contaminants through various pathways, particularly groundwater.

To determine if people were being exposed to contaminants in groundwater through their private wells, DOH and MDNR collected water samples from residences nearest and to the west of the site. No residences are located within approximately a half mile in the other directions from the site. A water sample was also collected from the elementary school. Further, agency representatives gathered information about the site's history, use, and other pertinent information from residents.

Groundwater samples were analyzed for bacteriological, metals (cadmium, chromium, lead), nitrate, and volatile organic compounds contamination. The results indicated that no site-related contaminants were detected and other normal groundwater contaminants (i.e. nitrate) were well within safe drinking water standards [\(5\)](#). Further, the investigation revealed no other pathway through which residents could become exposed to site-related contaminants [\(4\)](#).

As for the school, results from previous sampling (conducted in 1991, 1992, and 1993) showed trace amounts of toluene above the laboratory's detectable limit, but not above health concern in their private well water [\(1\)](#). However, samples taken during the February 21, 1996, DOH/MDNR survey indicated that toluene was undetectable [\(4\)](#).

Because no in-depth sampling has been conducted at the Rivet Mile site, there is a data gap about whether contamination is present on site, its location, and the levels at which the contamination might exist [\(6\)](#).

### CONCLUSIONS

1. Limited sampling of residential wells near the site showed none of the wells to be contaminated.
2. The literature documents what chemicals were used during the USAF's use of the site, but it is not clear whether the chemicals were released into the environment. No environmental sampling has been completed on site to determine if contamination is present. Therefore, it is possible that chemical contamination could still be present in on-site soil and groundwater.
3. Because this site has not been fully evaluated, more complete environmental sampling should be conducted before it can be accurately determined whether the site presents a health risk to on-site workers and/or to nearby residents.

Hazardous chemicals were known to have been used on site. There are reports of stained areas and the possibility of other buried underground storage tanks on site. Disposal methods for the hazardous chemicals

are not known, and there has been no sampling to confirm or deny the presence of contamination. The site could pose a potential health hazard for employees working on the site.

## **RECOMMENDATIONS**

1. Conduct further evaluation of the site to determine if any on-site contamination exists, especially in the surface soil and on-site groundwater.
2. If on-site contamination exists, determine whether it is affecting or could affect on-site workers or nearby residents.

## **PREPARERS OF THE REPORT**

Arthur Busch and Brian Quinn  
Missouri Department of Health

The information presented in this health consultation, along with the conclusions and recommendations, are based on the information referenced. They relate only to the ALC/Rivet Mile-USAF site and should not be applied to any other site or situation. When additional information becomes available, it will be thoroughly evaluated, and existing assessment documents will be updated to reflect any changes. DOH/ATSDR will respond appropriately to any request for additional information or action.

## **CERTIFICATION**

This Health Consultation for the ALC/Rivet Mile-USAF site and adjoining residences was prepared by the Missouri Department of Health under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). It is in accordance with approved methodology and procedures existing at the time the health consultation was initiated.

William Greim  
Technical Project Office, SPS, SSAB, DHAC

The Superfund Site Assessment Branch of the Division of Health Assessment and Consultation, ATSDR, has reviewed this Health Consultation and concurs with its findings.

Richard Gillig  
Chief, SPS, SSAB, DHAC, ATSDR

## **REFERENCES**

1. Missouri Department of Natural Resources. Preliminary Assessment Report, 00-ALC/Rivet Mile USAF, Pettis County, Missouri. January 5, 1996.
2. Telephone conversation with Environmental Protection Agency Remedial Project Manager. November 4, 1997.

3. Allied Enviro Engineering, Inc. Underground Storage Tank Site Closure Report for Rivet Mile/Owl Industries, Dresden, Missouri. February, 1990.
4. Missouri Department of Natural Resources. Memorandum, Site Visit with Missouri Department of Health to 00-ALC/Rivet Mile/USAF Site file. April 10, 1996.
5. Missouri Department of Health. Letters to residences providing results of private well sampling, Rivet Mile/USAF Site, Dresden, Missouri. March 14, 1996.
6. Missouri Department of Natural Resources. Letter to Tyson Foods, Inc. April 18, 1996.

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## APPENDIX

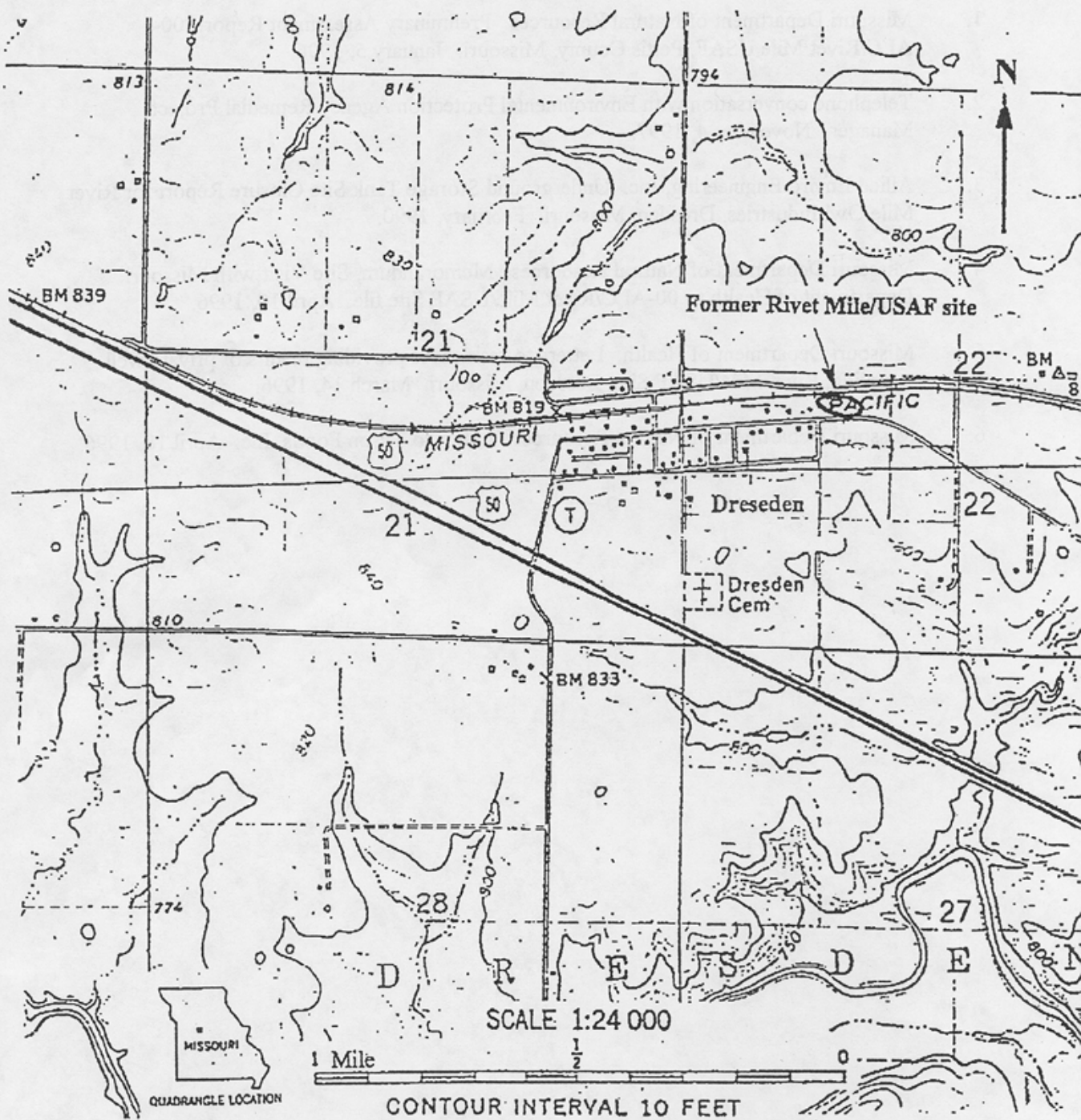
[Figure 1: Rivet Mile/USAF Site](#)



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Figure 1

RIVET MILE/USAF SITE



Source: USGS Topographic Map 7 1/2 min.  
Quadrangle Map 1973 Sedalia West, MO.